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DEPARTMENT OF TRANSPORTATION

COAST GUARD

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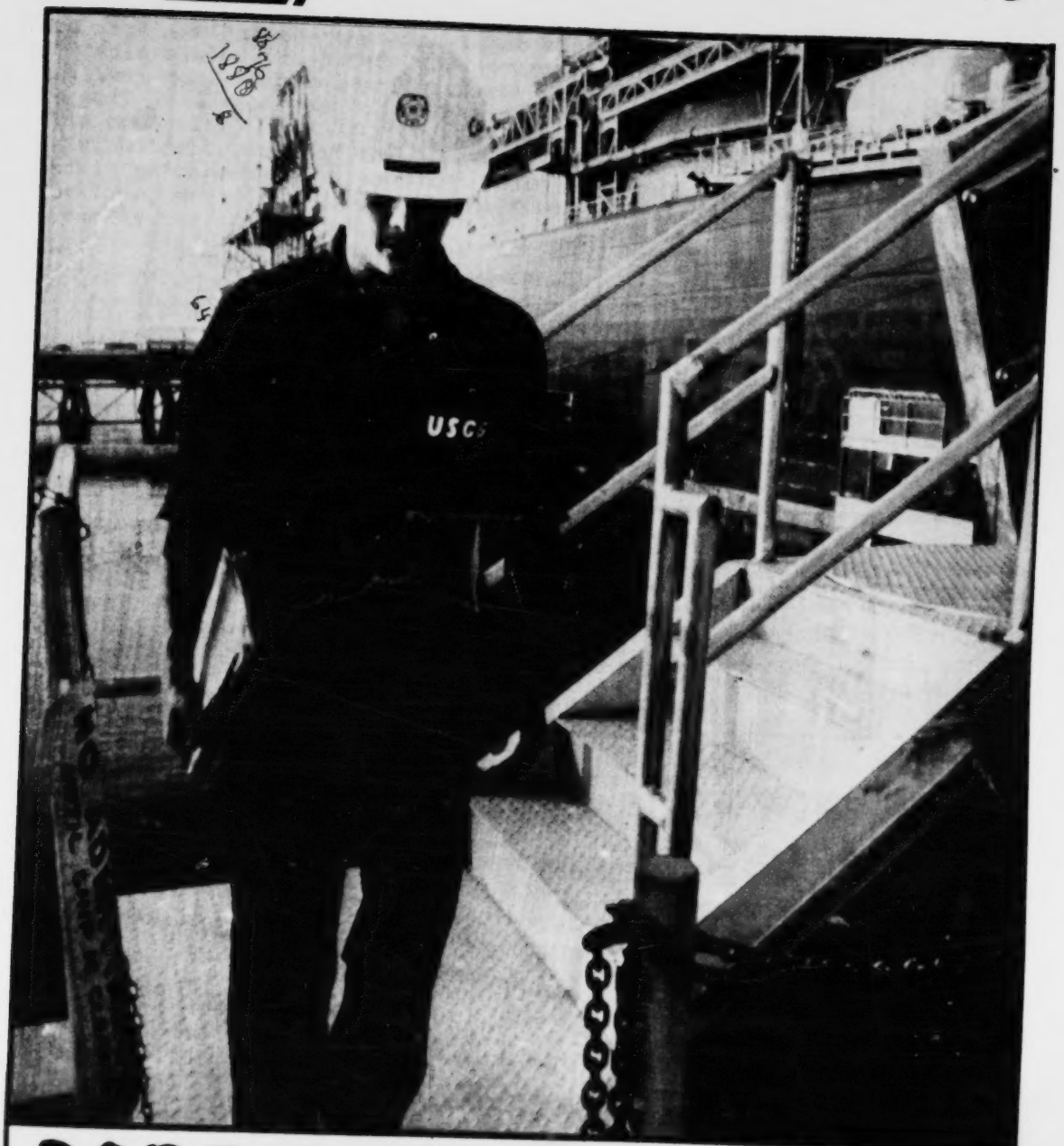

PORT SAFETY BULLETIN

No. 3

1980

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PURPOSE

With ever-increasing emphasis being placed upon environmental protection and maritime safety, the Captain of the Port has increased responsibility for maintaining the safety and security of our Nation's harbors. Achieving this goal requires professional expertise in a wide variety of fields as well as a good working relationship with civilian members of the maritime community. The *Port Safety Bulletin* is issued by the Commandant to provide the Captain of the Port with an informational reference. It should be considered a sounding board for problems common to all. Suggestions, articles and comments are solicited. Material may be submitted directly to:

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FRONT COVER: After completing his boarding duties, this Coast Guard inspector departs the vessel.

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Coast Guard continues study of exposure to toxic substances

by LT Guy Colonna
G-DMT-1

In *Port Safety Bulletin No. 2, 1980*, we discussed exposures and the potential for exposure to toxic substances in the workplace of Coast Guard marine safety officers and captain of the port personnel.

Chronic exposures are characterized by repeated low-level exposures which may occur without warning, and because of low concentration, physiological impairment may not result for years. Acute or chronic exposures may result during routine performance of required tasks by Coast Guard personnel, such as cargo transfer monitoring, enclosed space entry, and emergency and accident response involving oils and hazardous chemicals.

Stepped up physical examinations of field personnel, epidemiological studies of deaths and illnesses among Coast Guard marine inspectors, and environmental monitoring using personal sampling techniques represent evidence of the attention this potentially dangerous situation is receiving within the Coast Guard.

The Office of Research and Development conducted an in-house study to collect personnel exposure samples in the working environments of Coast Guard MIO/MSO/COTP personnel

In addition to identification and quantification of the exposures, another objective was to evaluate the potential applicability of a new personal sampling technique within the working environments being examined. The "Organic Vapor Monitor" (OVM), a badge-like dosimeter, is capable of sampling substances and measuring time-weighted average concentrations over measured time intervals of 8 hours or less.

The objectives were to attempt to quantify concentration levels by personal sampling, and to evalu-

ate the OVM in comparison with the commonly used charcoal sampling tubes.

TEST DESIGN

The charcoal tubes represent the accepted personal sampling technique, but pose some difficulties in application to the MIO/MSO/COTP work routine. Tube ends are broken, and the tube is attached to a flow-calibrated, battery-powered sampling pump, and the pump is operated at a specified flow for a pre-determined length of time to obtain the proper sample volume.

Analysis must be performed in a laboratory where the collected vapor is chemically removed from the charcoal and the sample is analyzed.

The weight of the collected vapor is converted to a parts-per-million (ppm) concentration and compared to established guidelines for worker exposure.

The sampling pump "grabs" the sample which passes through the tube where the vapors are absorbed onto the charcoal. Binary or "passive" diffusion constitute the operating principle for the OVM.

With the OVM, diffusion of the vapor contaminant to the sample collection medium inside the badge is controlled by the concentration of the contaminant in the sampled environment.

Diffusion will continue as long as a difference exists between the contaminant concentration in the monitored environment and contaminant concentration at the charcoal surface of the collection medium.

Development of a sampling strategy began with definition of variables which might influence exposure and identification and ranking of exposure scenarios. A statistical design approach was employed to estimate sample size required for the data collected to be statistically significant.

Two scenarios were identified and correlated to work routines of MIO/MSO/COTP personnel. The internal (in-tank) scenario represents primarily the marine safety officer (MIO/MSO) environment, while the external (on-deck) scenario relates more to the captain of the port responsibilities.

Types of previous cargo, date and time of issue of gas-free certificate, ventilation, tank condition and temperature, wind speed and direction, atmospheric temperature and humidity, and deck structures and distance to vent openings, were identified as variables significant to design of a sampling strategy.

MIO Houston was chosen to assist with the data collection. An attempt was made to match candidate substances for which sufficient OVM analytical data was available with cargoes frequently moved in and around the Port of Houston.

Nine suitable substances were identified, but changes in product volume necessitated reduction to four substances. Collection of samples continued through November 1979.

Personnel in MIO Houston were instructed on the purpose of the

study and use of the OVM and were asked to use the badges at every opportunity.

Evaluation of the OVM capability was accomplished through duplicate OVM sampling while simultaneously sampling with a charcoal tube and sampling pump. To obtain immediate feedback on the effort and to augment the data collected by MIO Houston personnel, I periodically collected OVM and charcoal tube samples myself.

Because MIO/MSO/COTP personnel do not typically remain in the same location for a complete 8 hours, shorter sampling periods were employed. These were determined to be more representative of exposure periods experienced at each individual location, less disruptive of work schedules, and less difficult analytically (each OVM sample represented primary exposure to only one substance). The four cargoes identified were benzene, styrene, toluene, and xylenes.

SAMPLE COLLECTION/DATA ANALYSIS

Organic Vapor Monitor samples were collected by the inspectors from the MIO Houston office and me. The MIO personnel principally obtained samples from in-tank inspections of barges using the OVM. To augment these samples, I used both the OVM and charcoal tubes (for comparison) in both internal and external scenarios. A total of 60 OVM samples were collected along with 25 charcoal tubes. More of the samples were collected from external scenarios (loading of product) than internal, and more of the samples were for exposures to benzene than to the other substances.

Analysis of the samples was performed at the Coast Guard Research and Development Center. Also, studies to identify the accuracy of collection and desorption of the charcoal tubes and OVM were performed through doping with known volumes of the solvents and subsequent gas chromatograph (GC) analysis. An additional comparison was made to verify my analytical technique with the analysis performed by 3M.

Eight OVM samples possessing duplicate OVM samples, collected simultaneously, were sent to 3M for professional analysis.

RESULTS

The results of preliminary data analysis and correlation to sampling data show that qualitatively, the OVM and charcoal tubes correspond very closely to each other for samples collected on-deck of barges or chemical tankers during cargo loading, discharge, or breathing on the vessel.

The OVM monitored benzene concentrations as low as 2 ppm for both internal and external sampling. Several OVM and charcoal tube samples indicated concentrations of benzene which exceeded 10 ppm, and approached the ceiling/short term exposure limit (CEIL/STEL), taken to be 25 ppm. These samples were collected within 5 feet of the vent or ullage openings during loading of benzene. Preliminary analysis of data collected for styrene and xylenes shows concentrations significantly lower than the threshold limit value (TLV) and STEL for these compounds.

Samples collected during loading

of Toluene produced concentrations of 280 ppm, only slightly below the STEL of 300 ppm. Comparison between OVM analysis labs (in-house and 3M) indicates agreement within 10 percent for concentrations which exceed 10 ppm.

RECOMMENDATIONS

The data collected have shown the existence and some indication of the degree of the chronic exposure hazard posed to the MIO/MSO/COTP personnel in the marine environment. The data indicate the chronic hazard exists, but full characterization of the hazard degree and any hazard assessment are not possible without extensive data collection.

The OVM results whow that sampling of the MIO/MSO/COTP working environment may be performed with acceptable accuracy and reproducibility using a passive diffusive monitor, and that in this case the OVM passive diffusive monitor compares favorably with the accepted standard charcoal sampling tube and pump.

The monitor was tested at its design limits for sampling at low concentrations, short duration; sampling in extreme temperature and humidity; and sampling in tanks which may diminish the flow velocity of the surrounding air past the monitor face. It appears to have functioned satisfactorily.

Advantages of the 3M badge dosimeter over the charcoal tube and pump:

- Ease of use by personnel in the field;
- Less materials to purchase (however, cost may not be less);
- Ease of analysis; and
- Analytical service available at 3M laboratory.

Neither the tubes nor the dosimeters yield immediate results; the analytical service at 3M has a 72-hour turnaround. Qualification data are required on each compound to be sampled by the 3M dosimeter for analysis purposes; therefore, the availability of the qualification data limits the compounds to which the OVM may be applied.

The National Institute of Occupational Safety and Health intends to promote the use of passive diffusion monitors in field industrial hygiene sampling; it is encouraging the use of the OVM for those compounds with low to moderate vapor pressures for which data are available.

The 3M OVM #3500 and other passive diffusion monitors are available for field sampling. To better characterize the exposure of Coast Guard field personnel in MIO/MSO/COTP work routines to compounds such as benzene, more data are required. The badge dosimeters provide in a convenient and reliable manner the exposure data necessary to document the medical exposure history of individual workers.

A profile could be developed detailing the exposure to specific compounds or multiple compounds, and it could aid in assessing the hazard of a specific work routine. It is recommended that some consideration be given to application of the badge dosimetry technique for acquisition.

Expansion of seaports revitalizes consideration of national port plan

by LT D.F. Wallace

During a period when massive expansion is occurring at many seaports throughout the nation, there has been a corresponding revitalization in consideration of a national port plan.

As expected, the prospect of further Federal involvement in the port industry is highly controversial. Because of the diverse and complex nature of the maritime transportation field, there exists numerous conflicting views as to the actual desirability or feasibility of Federal aid to ports, if any, and the extent or nature of that aid.

Historically, the Federal Government has contributed significantly to the growth and development of America's seaports. While local governments or private concerns have financed, built and operated onshore facilities, the Federal Government has financed, built, maintained and marked the navigable channels serving those facilities.

On the other hand, the rate and pattern of seaport growth, while influenced to a degree by Federal regulations, have largely and consistently remained the province of local initiatives and decisions. Consequently, there has never been a centralized, coordinated approach to port development at the national level.

This does not mean the idea has not been considered. The viability of alternative national schemes, ranging from providing Federal loans or grants for local port use to the actual planning and spacing of seaports by the Federal Government has been addressed several times in recent years.

Proponents of national port planning have criticized the abundant construction of similar port facilities within the same ports or within geographical regions as excessive and inefficient duplication, and a waste of a great deal of public funds. Conversely, the port industry, fearing the Federal control it feels would accompany Federal aid, has voiced its strongest opposition. It is the industry's firm belief that the implementation of a national development plan will ultimately eliminate competition among ports, thereby destroying the free market economic system under which ports have always operated.

To date, that position remains intact with one exception: since 1972, the port industry, through the American Association of Port Authorities, has endorsed the idea of Federal funding to offset non-

revenue producing costs arising from Federally mandated policies.

Seaport growth is presently at an all-time high. Between 1945 and 1978, $5 billion was invested nationally in seaport construction or modernization with $1.6 billion of that having been spent between 1973 and 1978.

While it appears on the surface that ports are booming, these figures do not tell the complete story. The 1979 General Accounting Office report to Congress stated: "America's seaports have successfully coped with dramatic changes in maritime transportation and cargo-handling techniques in recent years. In doing so, however, they have incurred large long-term debts, and many ports anticipate additional large capital expenditures to accommodate trade increases. Many ports are having difficulty obtaining funds from traditional sources for continued development....some ports do not earn enough to service their debts or, at times, cover operations."

GAO described the technological changes, primarily containerization and very large crude carrier/ultra large crude carrier construction, which have necessitated port expansion on such a grand scale; the effects of various Federal regulations and programs upon port development; and some of the root causes of the financial difficulties being experienced. It concluded the report by providing several broad options available to the Congress for dealing with the situation.

GAO consistently built a case throughout the report for the necessity of some type of action at the national level.

The report received mixed reactions by the Departments of Transportation, Army, Commerce and Interior. All found merit in the major issues, but all felt the report was limited in scope and depth. DOT, in particular, felt that GAO had not shown a sufficient need for Federal port assistance at the present time.

The report signals a new round in an ongoing controversy. As one of the most actively involved agencies in the nation's seaports, the Coast Guard can expect a considerable impact on many of its existing programs if national port planning becomes a reality.

Further concentration of vessel traffic at fewer ports (load centers), resulting alteration of traditional traffic patterns, increased specialization at ports of all sizes, increased consideration of deepwater terminals as an alternative to channel and harbor dredging, national security considerations, greater emphasis upon coastal zone management.

These are just a few of the countless potential facets of an ambitious national port plan. The effects would be far-reaching upon the full range of G-W programs: vessel traffic systems, aids to navigation, deepwater ports, port safety/security and environmental protection. Furthermore, it is reasonable to expect the Coast Guard will be intimately involved in the initial formulation of a national port plan because of those efforts.

For these reasons, the prospect of national port planning is indeed of critical interest to the nation, to the seaport industry, and to the Coast Guard. Although it is an idea whose time may not have arrived, the renewed debate surrounding it will certainly bear watching in the future.

AAPA seminar time well spent

by LCDR E.J. Williams, III

When asked by Coast Guard Headquarters if I would like to attend the April American Association of Port Authorities Management Seminar at the University of Tennessee at Knoxville, I eagerly agreed.

I wasn't sure what the seminar was about, but I looked forward to a trip to the Smokies and a university environment as a nice break from routine.

When I received a preliminary schedule showing that the sessions started at 9 a.m. and lasted through case study exercises some 13 hours later, I realized the trip might not be the leisurely vacation I had anticipated.

Port management seminars are attended by Coast Guard personnel who have had Port Safety Industry Training. The PSIT Program provides Coast Guard officers with an opportunity to learn and understand the complexities of operating a port and how decisions made by the Coast Guard and other regulatory agencies impact upon maritime industries.

The six-month PSIT Program is geared primarily toward officers who will be responsible for the development, administration, interpretation and enforcement of port safety regulations. Selection is made from lieutenant and lieutenant commander applicants with backgrounds in, or interests in assignment to, port safety and related billets.

A trainee is assigned to the port authority and considered to be on loan as an employee without pay, although he does not replace any employee.

Ports involved in the PSIT Program are Baltimore, Boston, Hampton Roads, Houston, Jacksonville, Los Angeles/Long Beach, New Orleans and Seattle.

Seminar participants played the role of port manager and developed solutions to real world problems through techniques learned in the seminar. This seminar provided me with management principles which I can use on my Coast Guard job, and provided me with further insight into the real world of managing the modern competitive port complex.

The seminar was presented by the University of Tennessee in conjunction with the American Association of Port Authorities. For the first time, it was held on the University of Tennessee campus. Most course materials such as financial management, logistics systems, marketing, etc., were taught by professors in the graduate schools of the university.

To focus on particular problems common to many ports, the seminar was divided into groups, each of which would study real world cases where definite objectives, goals and methods were needed to solve a port problem.

The groups proposed solutions which were presented to the seminar the following day. Cases covered such concerns as sudden loss of cargo through a port due to national or industry economic slowdowns, strong environmental opposition to

port expansion plans, port mergers and the resulting organization, and other cases taken from the real world of corporate and port management.

The seminar commenced with an overview of management with emphasis on "knowing yourself and your traits." Leadership traits and decision-making within groups sparked a lively session when members identified with characters in a management film.

A discussion on transportation management included the cost of maintaining an inventory and its carrying costs in addition to the cost of managing transportation. The business approach was worthwhile as it was a reminder that while the port plays a vital role as a transportation hub, it must be viewed in the context of a business. Failure of a port to carry out its primary function can cost the shipper or consignee heavily in inventory carrying costs.

We looked at National transportation policy on the Federal, State and local levels. These groups have widely diversified opinions and goals for a port complex and a port administrator must operate in a manner to satisfy interest groups while remaining under the guidelines set by the original charter or legislation.

Another major area of the seminar was directed toward marketing of port services. The requirement to identify a real need and fill it was stressed. Throughout the seminar, we discussed the port entity as a profitmaking corporation and the objectives that have to be similarly perceived and understood by each person in the organization.

In addition to the seminar format and the professors who led, there was much give and take between the participants. Attendees from the various ports brought a wealth of practical experience to the discussions.

I found the dialogues and arguments enlightening and could readily see how different ports could develop different solutions to similar problems. The roles of politics and interest groups were brought forth in these spirited discussions.

In addition to professors from the Unitersity of Tennessee, we had instructors and discussion leaders from various ports who brought many years of experience in handling day-to-day problems of a competitive port. Labor, environmental and political difficulties were all examined in the light of actual experience and decisionmaking.

These were but a few of the areas covered in the seminar. For those who have the opportunity to attend one of these seminars in the future, I would strongly recommend it. My time was well spent.

'White' COFR cancelled

The Federal Maritime Commission has notified Coast Guard that the "grandfather" list of "white" (oil pollution) certificates of financial responsibility (COFR) have been cancelled as of July 1. Only new "blue" COFRs should be accepted by Coast Guard enforcement personnel at this time.

COFR cases should be processed in accordance with Commandant Instruction 16460.4 of October 14, 1976, until it has been revised and incorporated into the Marine Safety Manual, anticipated about October 14, 1980.

Glossary of maritime industry terms

by LT Norman Scott Porter

The following glossary of terms used in the maritime industry, although not all-inclusive, is intended as a reference to assist those associated with the industry.

B

backland - Land area behind docks and berths within a port, used for marshaling, storing and handling of cargoes.

bill of lading - A contract of carriage between the shipper and the carrier covering a single shipment. May be a receipt for claiming of goods. May be negotiable as a prerequisite to financing and credit. Form is usually provided by the carrier and filled out by the shipper or his agent.

bill of lading (through) - Bill of lading covering movement of cargo from the premises of the owner to the ultimate consignee when transportation involves two or more connecting carriers.

bonded goods - Dutiable goods upon which excise duty has not been paid. The bond is the agreement entered into by the owner of the dutiable goods with the customs and excise authority in which he promises to pay the duty when the goods are released for final distribution or use.

bonded warehouse - A storage facility certified by U.S. Customs as meeting standards of security for storage of goods in bond.

C

cartage - The trucking, draying or carting of freight.

CFS (container freight station) - A facility where goods are received by a carrier for loading into containers and where the carrier assembles, holds or stores its containers or trailers.

C&F (cost and freight) - Foreign shipper agrees to pay transportation and costs but not the insurance charges to the point indicated.

Cheksan - Trade name for discharge arms used in loading and unloading liquid bulk cargo.

CIF (cost, insurance and freight) - Cost of goods, marine insurance and all transportation charges are paid by the shipper to the point of delivery. Allows shipper to control cargo movement.

common carrier - A partnership, individual or corporation, such as a railroad or steamship company, which offers itself for hire to transport persons or commodities. Common carriers must accept all business offered them within their operating authority.

COFC (container-on-flatcar) - Carriage of intermodal containers without their highway chassis on rail flatcars.

conference carrier - A shipping company which belongs to an association of shipowners operating in similar areas and along similar

routes. All carriers in the conference agree to operate under collective conditions of carriage and rates.

consignee - Person or company to whom goods are sent.

consignor - Person or company who sends goods to another.

consolidator - A contractor who assembles small shipments which are less than container loads (LCL) into full containers.

container handling equipment - There are several hundred different devices used in handling containers and each has a trade name and possibly several slang names. The following list is neither inclusive nor exhaustive:

bomb cart - Container chassis used in container yard movements only. Not equipped for open road operation.

piggy packer - Railroad equipment used in loading and unloading of containers and trailers on rail flatcars.

Portainer - Trade name for land base gantry used in ship loading and unloading. Also Starporter.

Shipstainer - Trade name for ship base gantry used in ship loading and unloading.

side loader - General term for forklift equipment used in side handling of containers.

Starporter - See Portainer.

straddle carrier - General name given to a variety of container yard equipment which straddles containers, lifts them and transports them in the straddle position.

top loader/handler - General term given to several types of forklift equipment modified to include locking overhead spreader bars for picking up containers.

Transtainer - Trade name for land base crane which is used in container yard operations.

yard hustler - General term for tractor unit used to haul containers on chassis in container yard.

container types - 1) standard (std) - end loading; fully enclosed. 2) high cube (hc) - same as standard except 1 foot taller. 3) side loading; fully enclosed. 4) open top (ot) - for bulky or awkward items. 5) platform - for overlength or overwidth cargo. 6) flat rack (fr) - for overheight or other non-containerizable cargo. 7) ventilated. 8) insulated. 9) refrigerated (rfr). 10) dry bulk. 11) automotive. 12) portable tank (pt). 13) livestock. 14) collapsible.

custom house broker - A party licensed by U.S. Customs for handling all details of documentation for import shipments.

CY (container yard) - Location at a container terminal designated for the receiving, assembling, holding, storing and delivering of containers.

D

delivery order - An order issued by the owner of the goods requesting the terminal to deliver the goods to the bearer.

delivery receipt - A receipt obtained from the person or persons picking up inbound cargo from the terminal.

demurrage - See wharf demurrage.

dockage - Charge assessed against a vessel for berthing at or making fast to a municipal berth.

dock receipt - A receipt for goods as they are received by the terminal preparatory to loading, usually exchanged for the bill of lading.

E

export declaration (ex dec) - U.S. Department of Commerce form filled out by a shipper showing the value, weight, consignee, destination, etc., of shipments to be exported.

F

FAS (free along side (vessel)) - A price quotation under which the exporter quotes a price that includes delivery of the goods to the vessel's side and within reach of its loading tackle. Subsequent risks and expenses are for the account of the buyer.

FCL (full container load) - Container loaded to maximum volume or weight capacity.

fire warp - A fiber or wire rope by which a vessel could be moved in event of fire aboard the vessel or at an adjacent pier. The warps are rigged out fore and aft and lowered to water level upon arrival.

FMC (Federal Maritime Commission) - The independent Federal regulatory agency charged with regulation of the ocean commerce of the United States. Responsibilities of the Commission include: 1) surveillance over services, rates, practices and agreements of common carriers by water engaged in foreign commerce; 2: receipt and review of freight rates filed by common carriers by water operating in foreign commerce; 3) investigation of discriminatory rates, charges, classifications and practices of common carriers by water in foreign and domestic offshore commerce, terminal operations and freight forwarders; 4) regulation of rates, charges, classification and practices of common carriers by water in the domestic offshore commerce; 5) licensing of independent ocean freight forwarders; 6) assuring availability of funds for oil pollution or hazardous substances cleanup and to cover liabilities to those who travel or cruise by water; and 7) rendering decisions, issuing orders, rules and regulations governing and affecting common carriers by water in the foreign and domestic offshore commerce, terminal operators, freight forwarders and other persons subject to the shipping statutes.

FOB (free on board (vessel)) - A price quotation under which the exporter quotes a price that includes delivery of the goods on board the vessel. Subsequent risks and expenses are for the account of the buyer. The term FOB may also be used in conjunction with an inland shipping point to indicate that expenses up to the point specified are for the account of the seller.

free time - Specified number of days during which freight received (by land or sea) at a terminal may occupy terminal premises without payment of demurrage (excludes Sundays and holidays).

freight forwarder - An FMC-licensed person or corporation which acts as agent in the shipment of cargo to foreign countries. A freight forwarder arranges transportation for a client's cargo and

insures all necessary paperwork is completed to speed the movement of the cargo.

FTZ (foreign trade zone) - A U.S. Customs-supervised area declared by the U.S. Foreign Trade Zone Board as being outside the territorial constraints of the United States for purposes of promoting duty-free activities. Within an FTZ, non-prohibited foreign imports or exports may be stored, exhibited for sale, processed or used in internal manufacturing operations without being subjected to customs duties and quotas until the goods leave the FTZ for consumption in the U.S.

I

in bond - Status of merchandise admitted provisionally to a country without payment of duties either for storage in a bonded warehouse or for transshipment to another point where the duties will be imposed.

industrial dock - Dock at a facility where materials are manufactured and/or processed and from which they are shipped or at which materials used in the manufacture or process are received.

J

jitney - Gas or electric machine used for hauling cargo trailers or for shuttle of personnel on a waterfront facility.

L

land bridge - A joint water/rail/water tariff to move containerized cargo from one foreign port to another through the United States. (Example: Tokyo to Long Beach by ship, Long Beach to New York by rail, New York to Rotterdam by ship.)

landlord port - A port whose land and some or all of its facilities are owned by the port governing body but are generally operated and managed by private operators under a variety of contractual agreements and leases. The private operators assume legal responsibilities and liabilities and become subject to the direct regulatory control of governmental agencies.

LASH (lighter aboard ship) ship - A vessel built to carry specially designed barges (lighters) which can be towed or pushed in harbors and inland waterways throughout the world. LASH vessels are designed to carry barges in vertical holds (one above the other).

lay berth - A temporary berth assignment for a vessel to conduct non-cargo transfer activities such as bunkering or emergency repairs.

LBL (less than bargeload) - That weight which is less than the minimum required for the assessment of minimum bargeload rates.

LCL (less than containerload/less than carload) - That weight which is less than the minimum required for the assessment of minimum carload/containerload rates. Shippers of LCL cargo will usually consolidate their cargo into a single container or car to obtain the best rates.

letter of credit - A method of settlement between buyer and seller as well as a means of encouraging and expediting foreign trade. The letter provides a bank's assurance that money will be paid promptly to the exporter when he makes shipment as specified under the terms of the letter.

liner - A vessel, usually a common carrier, engaged in the

carriage of general cargo along a definite route on a fixed schedule.

lo/lo - Vessel type where cargo can be lifted on or off the vessel by either ship or shore cranes.

longshoreman - A man who works at loading or discharging vessels either aboard ship or on the wharf. Longshore laborers may be divided into two general sections: those who work on the ship, or stevedores; and those who belong to the dock gang. The term "longshoreman," however, usually is used to refer to all the laborers who do physical work, whereas the term "stevedore" usually refers to the contractor or boss who employs longshoremen.

long ton - A unit of weight of 2,240 pounds.

LTL (less than truckload) - that weight which is less than the minimum required for the assessment of minimum truckload rates.

M

MARAD (Maritime Administration) - U.S. Department of Commerce agency which administers Federal laws designed to promote and maintain a U.S. merchant marine capable of meeting the Nation's shipping needs for both domestic and foreign commerce and national security. Major activities include providing financial assistance for ship building and ship operation, maintenance of a reserve fleet, national emergency preparedness, shipping-related research and development, market development and operation of the U.S. Merchant Marine Academy.

microbridge - A joint through water/rail or rail/water tariff and route on one bill of lading to a foreign port from an inland U.S. city or from a foreign port to an inland U.S. city. (Example: St. Louis to Los Angeles by rail, Los Angeles to Seoul by ship.)

minibridge - A joint water/rail or rail/water tariff on a single bill of lading for a through route from a foreign port to a U.S. port destination through an intervening U.S. port, or the reverse. (Example: Tokyo to Seattle by ship, Seattle to Houston by rail.)

N

neobulk cargo - Unitized commodities usually consisting of truck-size lots of cargo such as lumber, paper, steel and automobiles.

NVOCC (non-vessel operating common carrier) - A carrier which offers international cargo transport service through the use of another carrier's vessels and under its own rate structure in accordance with tariffs filed with the FMC.

O

OBO (ore/bulk/oil) - A bulk carrier capable of handling bulk cargoes of ore, oil, grain, etc.

OCP (overland common point) - Used in west coast import trades to designate destinations east of the States of Montana, Wyoming, Utah and Arizona where transportation rates are reduced to enable west coast carriers to compete with Atlantic and Gulf coast carriers.

operating port - A port whose land and some or all of its facilities are owned, operated and managed by the port governing body. The port is the "owner-operator" and thereby assumes many of the

legal responsibilities and liabilities and becomes subject to government regulator controls.

P

pig - A railroad term for a trailer or container on a chassis which is loaded on a railroad flatcar.

piggyback - The hauling of road vehicles and/or trailers and containers on chassis on railroad flatcars.

pilotage - Charge assessed against a vessel for the service of piloting such vessel on entering or leaving port or shifting berths within a port.

preferential assignment - First call on berth privilege. The priority right granted (usually in lease agreement) a person or corporation to use a certain berth, wharf or facility, including such improvements and areas as are designated in the assignment.

R

road railer - Rail van. The latest innovation in intermodal transport. The system features specially designed trailers with a dual wheel system allowing the trailer to run on both highway and rails. When on rails, the trailer has special connecting devices to allow it to couple to another road railer.

ro/ro - Vessel type where cargo can be rolled on/rolled off and where ramps for the unloading of equipment and cargo are provided by the vessel.

S

Seabee vessel - Trade name for barge-carrying vessels operated by Lykes Lines. Different from LASH vessel in that barge holds are arranged horizontally rather than vertically.

secondary assignment - Second call on berth privilege. A subordinate right granted (usually in lease agreement) to a person or corporation to use a preferentially assigned berth subject to the prior rights of a preferential assignee with whom such secondary assignee must share by agreement the costs and expenses incidental to the assignment.

ship chandler - A dealer in supplies and equipment for ships.

short ton - A unit of weight of 2,000 pounds.

stevedore - A person or firm employed in loading and unloading vessels. The stevedore, in return for a fixed rate of remuneration, generally so much per ton, provides the men and equipment for working the cargo in or out of a vessel. (Note: definition may vary from coast to coast.)

storage - See wharf storage.

supercargo - Traditionally the officer aboard a merchant vessel responsible for cargo operations. The use of computer-generated stowage plans has in many cases caused this job to be moved ashore where it is conducted by a senior longshore clerk.

T

tariff - A schedule of rates or charges and regulations of a business or public utility.

TEU (twenty-foot equivalent unit) - A vessel which is said to have a capacity of 1,000 TEUs would be able to carry 1,000

standard 20-foot containers, 500 standard 40-foot containers or a combination of both adding up to the same volumetric capacity.

TOFC (trailer on flatcar) - See piggyback.

trade route - A specifically designed channel through which the commerce of the United States flows between a particular United States coastal area or areas and a specific foreign coastal area or areas.

Trailer Train - Trade name for a rail flatcar specially designed to carry intermodal cargoes such as pigs, containers and automobiles.

tramp - A vessel that does not operate along a definite route or a fixed schedule, but calls at any port where cargo is available.

transit shed - A port storage building normally located adjacent to a cargo ship berth and specially adapted for handling material received or shipped by water. Designed for short term storage only.

turnaround time - Time from vessel arrival on berth to vessel departure following all cargo transactions. Availability and adequacy of labor are the controlling factors.

W

wharfage - Charge assessed against all merchandise for the use of wharves or wharf premises.

wharf demurrage - A penalty charge against merchandise remaining on the wharf after a designated period of free time.

wharfinger - Any person or corporation (including a public agency) who owns, operates, manages, or controls any wharf or pier, or any dock or other water space for the accommodation of vessels and who holds himself or itself out to furnish any such facility for compensation or hire in connection with transportation by water carriers.

wharf storage - Charge assessed against merchandise which remains on a municipal wharf or wharf premises and has been accepted for storage by the appropriate port authority.

APOLOGIES!!

The item on page 12 of *Port Safety Bulletin No. 2, 1980*, "LOOP scheduled to open first deepwater port in 1981," was shown to be authored by LT D.S. Gilbert. The article should have shown that LT M.J. Hall co-authored the article with Gilbert.

MSO Detroit deals with industry concerns

Marine Safety Office Detroit recently dealt with local industry concerns during a 1-day port safety workshop at which 65 members of the local maritime community participated. Included were shipping agents, oil and chemical facility operators, tank vessel operators and marine surveyors.

The workshop concentrated on local, frequently controversial marine safety topics which were intended to stimulate debate and ultimately lead to mutual understanding of local Coast Guard and industry policies and concerns.

Topics on the workshop agenda were:

- Making the waterfront facility regulations work for you;
- The nuts and bolts of the pollution prevention regulations and what MSO Detroit looks for;
- The international shipping agents' interests and responsibilities; and
- Local concerns in the shipment of ferrous metal turnings.

A unique concept in the workshop was the use of marine industry and Coast Guard co-chairmen to develop each topic. Although the co-chairmen worked together, industry still had the opportunity to level criticism at Coast Guard policy.

Maritime community representatives requested consistency in maritime safety boardings and inspections. MSO representatives clarified Coast Guard interests in entering private property.

"Above all," said CDR Karl Wassenberg, COTP, "the workshop demonstrated the critical need for open communication and full understanding between the Coast Guard and the marine industry."

Chemical data guide due soon

Merchant Marine Safety Division is preparing a new edition of the *Chemical Data Guide for Bulk Shipment by Water*. Any suggestions, additions or comments should be sent to: Commandant (G-MHM-3/14), U.S. Coast Guard, Washington, D.C. 20493. Submissions received before September 15 will be considered for publication. For more information, call Joe Jakabcin at FTS 425-6260.

Stickers free for asking

Stickers with the toll free telephone number for reporting chemical spills, and with penalty information also imprinted, are available from G-WPE-1, LTJG Mark Ives, FTS telephone number 426-1927.

Navigation safety charts

Charts on the following two pages show current SOLAS and Coast Guard navigation safety regulations. By looking at the appropriate column corresponding to a vessel's tonnage, equipment requirements for that vessel appear at the left.

For additional information or copies, contact the Waterway Safety Branch of the Waterways Management Division at FTS number 426-4958.

NAVIGATION SAFETY REGULATIONS OF THE U.S. COAST GUARD

		Applies to U.S./ foreign ships, by gross tonnage as indicated: GROSS TONNAGE 1,600 – 10,000
PUBLICATIONS		
Charts of proper scale for area navigated	33 CFR 164.33(1)i	● ——
Currently corrected charts	33 CFR 164.33a(1)ii&(b)[6]	● ——
U.S. Coast Pilot	33 CFR 164.33(2)i	● ——
Coast Guard light list	33 CFR 164.33(2)ii	● ——
Current tide tables	33 CFR 164.33(2)iii	● ——
EQUIPMENT		
Surface navigation radar	33 CFR 164.35(a)	● ——
Ill. Stg. Mag. compass in binnacle	33 CFR 164.35(b)	● ——
Magnetic compass deviation table	33 CFR 164.35(c)	● ——
Gyrocompass	33 CFR 164.35(d)	● ——
Ill. gyro repeater at main steering stn.	33 CFR 164.35(e)	● ——
Ill. rudder angle indicator	33 CFR 164.35(f)	● ——
Wheelhouse maneuvering fact sheet	33 CFR 164.35(g)	● ——
Echo depth sounding device	33 CFR 164.35(h)	● ——
Continuous recording depth device	33 CFR 164.35(i)	● ——
Relative motion plotting equipment	33 CFR 164.35(j)	● ——
Second independent radar system	33 CFR 164.37(a)[7]	● ——
ELECTRONIC POSITION FIXING DEVICES		
LORAN C[1]	33 CFR 164.41(1)	[2] ● - - - - - - ● ——
LORAN C current charts	33 CFR 164.30	[2] ● - - - - - - ● ——
LORAN C manufacturer's label[5]	33 CFR 164.41(2)ii	● - - - - - - ● ——
----------or----------		
Satellite navigation system[3]	33 CFR 164.41(2)	[2] ● - - - - - - ● ——
----------or----------		
Hybrid satellite navigation system[4]	33 CFR 164.41(3)(d)	[2] ● - - - - - - ● ——
----------or----------		
Alternative system as described in	33 CFR 164.41(b)(3)	[2] ● - - - - - - ● ——

AUTOMATIC RADAR PLOTTING AIDS

ARPA - effective July 1, 1982, for those vessels which carry oil or hazardous materials in bulk or as cargo in residue (also referred to as ERMA - Electronic Relative Motion Analyzer).

1. Effective June 1, 1979, for tank vessels. If installed after June 1, 1979, must be either TYPE I or TYPE II. All TYPE IIIs must be replaced by June 2, 1982.
2. Effective June 1, 1982.
3. Stand alone if installed prior to June 1, 1982, and may be used through June 1, 1985.
4. Must have continuous update capability. Required on all vessels after June 1, 1985, and new installations after June 1, 1982.
5. Effective June 1, 1982, for new installations and June 1, 1985, for existing receivers.
6. Recognizes use of foreign published charts with similar information.
7. Long and short range capability, true north features, display stabilized in azimuth.

COMPLETE DESCRIPTIONS OF EQUIPMENT/PUBLICATIONS REQUIREMENTS ARE IN 33 CFR 164

SOLAS: Shipborne Navigational Requirements

EQUIPMENT	GROSS TONNAGE									
	less than 150	150 or more	500 or more	1,600 or more	5,000 or more	10,000 or more	15,000 or more	20,000 or more	40,000 or more	100,000 or more
1. Standard or steering magnetic compass	•	•	•	•	•	•	•	•	•	•
2. Means for taking bearings[2]	•	•	•	•	•	•	•	•	•	•
3. Magnetic compass deviation table		•	•	•	•	•	•	•	•	•
4. Spare magnetic standard compass		•	•	•	•	•	•	•	•	•
5. Gyro compass			•(1)	•	•	•	•	•	•	•
6. Gyro compass readable by helmsman at main steering station				•	•	•	•	•	•	•
7. Gyro repeater(s) suitably placed for taking bearings[2]				•	•	•	•	•	•	•
8. RADAR			•(1)	•	•					
9. Two RADARs capable of independent operation						•	•	•	•	•
10. RADAR plotting facilities			•(1)	•(3)	•	•	•	•	•	•
11. ARPA[11]						•(4,6,10)	•(4,9)	•(8)	•(5,7)	•
12. Echo sounding device			•(1)	•	•	•	•	•	•	•
13. Speed and distance device[12]			•(1)	•(1)	•(1)	•(1)	•(1)	•(1)	•(1)	•(1)
14. Rudder angle indicator			•(1)	•	•	•	•	•	•	•
15. RPM indicator			•(1)	•	•	•	•	•	•	•
16. Pitch indicator for VP wheels			•(1)	•	•	•	•	•	•	•
17. Rate of turn indicator										•
18. Radio telephone distress frequency homing capability				•	•	•	•	•	•	•

1. New construction
2. Arc of the horizon of 360° or as near 360° as practicable
3. As effective as a reflection plotter
4. Keel laid on or after January 1, 1984
5. Existing tankers from January 1, 1984
6. Existing tankers from January 1, 1985
7. Other existing ships from January 1, 1986
8. Other existing ships from January 1, 1987
9. Other existing ships from January 1, 1988
10. Other existing ships from January 1, 1989
11. ARPAs fitted prior to January 1, 1984, which do not meet MPS adopted by IMCO may be retained until January 1, 1991
12. Ships required to carry ARPA shall also carry device to indicate speed and distance through the water
13. U.S. will accept IMCO certificates of member organizations